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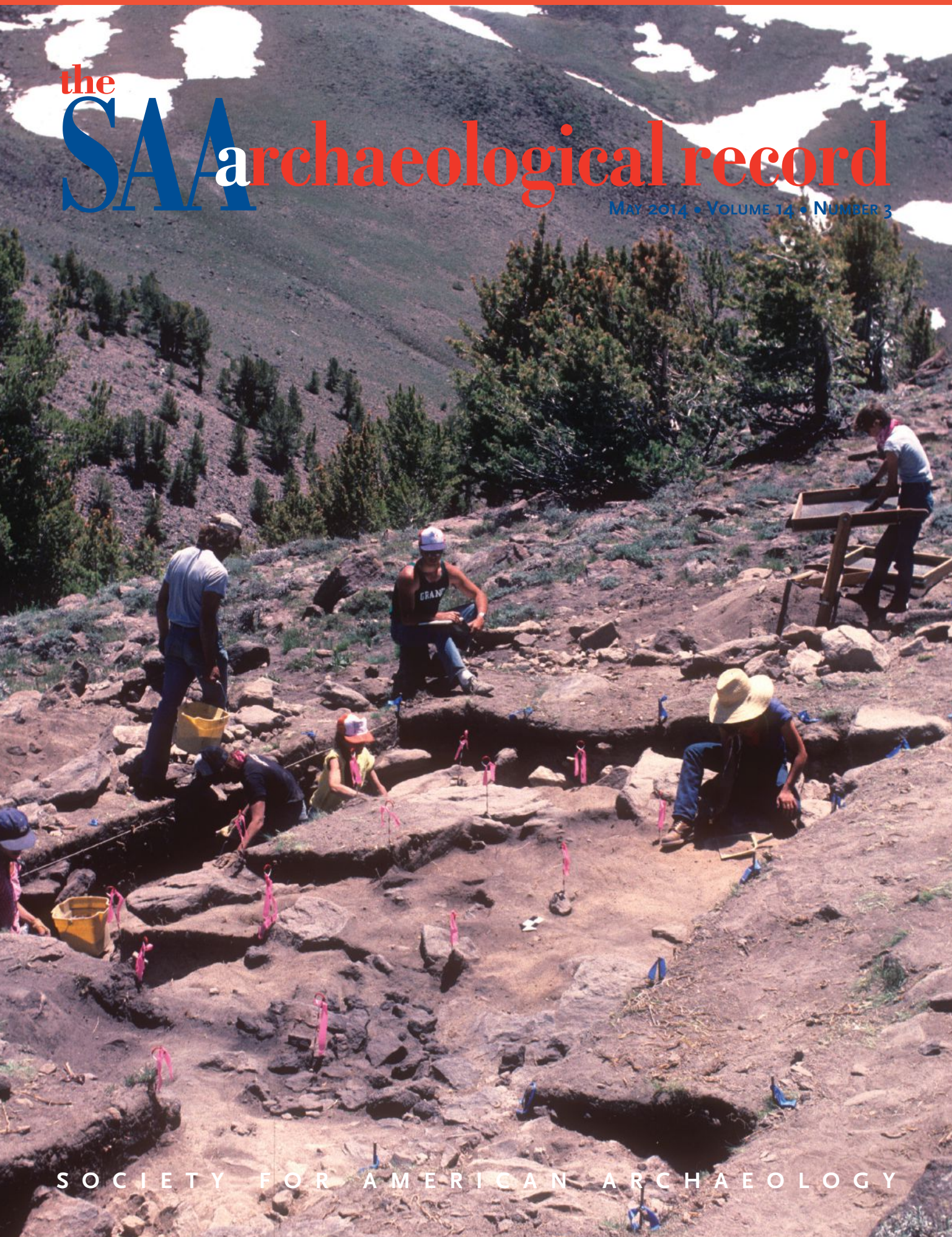

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On the cover: Summertime excavations at Alta Toquima—Figure 4 from the article, Exploring and Explaining Alta Toquima: The Higher You Get, The Higher You Get (photo reproduced by permission of David Hurst Thomas)

HIGHLAND ZONE EXPLOITATION IN NORTHWESTERN GREECE

THE MIDDLE PALEOLITHIC LEVALLOIS SITES OF THE PINDUS RANGE OF WESTERN MACEDONIA

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This paper presents the preliminary results of the surveys and excavations undertaken along the fringes of the Pindus mountains of Western Macedonia (Northwestern Greece), where over 300 sites, among which are isolated tools and chert quarries attributed to an advanced period in the development of the Middle Paleolithic Levallois Culture, have been discovered during the last 13 years of intensive research promoted by Aristotle University, Thessaloniki (Efstratiou et al. 2006, 2011). The main scope of the "Grevena Project" was to discover new prehistoric sites in order to improve our knowledge of the peopling and exploitation of the mountain range, where only a few Iron Age and Hellenistic sites were known before that date. Additional goals included resuming excavation campaigns and eventually opening a few trial trenches to define the stratigraphic position of material culture remains and, whenever possible, date them.

It is well known that, in contrast with a few other regions of Europe, the Alps (Biagi and Nandris 1994) and the Pyrenees (Bahn 2005), for instance, high altitudes rarely attracted the attention of the Balkan archaeologists, whose research has often been centered on the fertile alluvial plains of the Danube, its tributaries, and eventually their surrounding hilly landscapes. In effect, apart from a few exceptions, among which are Epirus, Albania, and Thrace, Balkan prehistory is famous mainly for the presence of large Neolithic villages, sophisticated varieties of painted wares, the uniqueness of plastic representations, the number of Bronze Age fortified settlements, and the spread of the kurgans all over a wide part of its territory.

Given the above premises, research in the Pindus was focused mainly around the town of Samarina, the most important Vlach center in the region, the population of which fluctuated greatly, especially during the last century, because of the complex political events that affected this region of present-day Greece. Located at an altitude of some 1450 m along the southern slopes of the Gurguliu and Bogdani mountains, it is delimited to the east and the south by the course of the Samariniòtikos (Yiotsa) River that, bending to the west, flows toward the Ionian Sea (Figure 1).

Very little is known of the early history of Samarina. The village is supposed to have been founded in the fifteenth century A.D., although Vlach tales and ballads suggest that the area had been temporarily settled centuries earlier by transhumant shepherds who camped somewhere in its vicinity. This tradition is perhaps supported by the discovery of a temporary site, radiocarbon-dated to the sixth century A.D., recovered along the slopes of Mt. Gurguliu extending just north of the small town. Curiously enough, it is to the sixth century indeed that Procopius, in his chronicles, traces the existence of Vlach communities in the Balkan Peninsula (Wace and Thompson 1923:256).

Samarina is considered to be the "capital" of the Vlachs of Western Macedonia, even though, at present, pastoralism and long-distance transhumance to and from the lowlands of Thessaly, and the Larissa Plain in particular, are noticeably less common than during the Ottoman Empire or before World War II (Sivignon 1968; Chang 1999).

Figure 1. The Vlach town of Samarina, in the center of the picture, along the southeastern slopes of Mts. Gurguliu and Bogdani, taken from the southeast, with the highest peaks of the Smolikas massif in the background (photograph by P. Biagi).

The Surveys

Since the main scope of our research was the recovery of hunter-gatherer sites, the first surveys were undertaken in a few areas where small water basins were known to the local villagers, starting from an altitude of some 1000 m upward. Forty years of research in the Italian Alps have shown that Late Paleolithic and Mesolithic hunter-gatherers preferred to settle close to passes of easy access, along the shores of small basins of glacial origin, and at altitudes ranging from ca. 1000–2500 m. According to these premises, and mindful of the presence of Middle Paleolithic artifacts recovered around Samarina from the top of the right terraces of the Samariniòtikos by J. Nandris in the 1960s, in October 2001 a first visit was paid to a small, shallow lake located just above Smixi, at some 1250 m of altitude, where a few typical Levallois flakes obtained from a light gray variety of chert were collected from the surface not far from the lake shore.

Following the above discovery, the surveys were continued first on the watershed that elongates in a north-south direction east of Samarina at some 1700–1800 m of altitude. The watershed is very rich in springs where Vlach shepherds water their flocks daily during the grazing season. Surprisingly, not only were many scatters of Levallois flakes recovered in many places, but also an outcrop of light gray chert, exploited by Middle Paleolithic hunters to produce their tools, was found at the top of the ridge. Further investigations in the area revealed that the above chert deposit extends for at least 1500 m and is characterized by both seams and nodules of large dimension, part of which can also be found downhill along small streams draining the slopes (Efstratiou et al. 2011).

The discoveries made along the watershed are of primary importance for the definition of one of the probable routes followed by the Middle Paleolithic hunters during their seasonal movements between Western Macedonia and Epirus, whose present political boundary is marked by a neighboring saddle called "La Greklu" (Wace and Thompson 1914:178), where another important Levallois Middle Paleolithic site was discovered in the autumn of 2011. After 10 seasons of intensive surveys, more than 200 scatters, spots, or isolated specimens of Levallois Middle Paleolithic period have been recorded, distributed over a region some 25 km in diameter at altitudes ranging between 1200 and 1800 m.

The surveys were later extended to the slopes of Mt. Gurguliu, as well as to the watershed that separates Samarina from Epirus and leads to the Smolikas massif. Interestingly Levallois artifacts were collected also from the surface of the above narrow ridges, up to some 2100 m of altitude, close to the top of Gurguliu and Bogdani.

Because most of the artifacts were collected from the surface, the absolute date of the Samarina Middle Paleolithic assemblages is difficult to define. However, the typology of the chipped stone artifacts, among which are typical discoid Levallois cores, flakes, unretouched and retouched points, side scrapers, and a few Levallois blade products, suggests that the area was settled (or crossed) in a recent period in the development of the Middle Paleolithic. This impression is also confirmed by the presence of Levallois artifacts at the top of the most recent glacial moraines descending from the Smolikas group, which have been radiometrically dated to some 70 kyr (Hughes et al. 2006).

The 2010–2013 Discoveries

Two very important Levallois Middle Paleolithic sites (SMR-1 and SMR-2) were discovered at the end of the 2010 season. They are located at an altitude of some 1,520 m on the alluvial terraces that extend along the right southern bank of the Samariniòtikos River, some 19 m above its present bed, at the point where three seasonal watercourses converge and widen at the valley (Figure 2).

SMR-1 rests on a wide, well-preserved terrace covering a surface of some 3,000 m^2, while SMR-2 is located a few dozen meters west of the preceding one and is much more poorly

Figure 2. The terrace on which the sites of SMR-1 (red dot) and SMR-2 (blue dot) are located, at the confluence of three seasonal watercourses, the most important of which is the Samariniòtikos, taken from the outcrop discovered at the top of the opposite watershed. In the left corner below, a Levallois flake from the surface of SMR-2 (photograph by P. Biagi).

preserved. Both geomorphologic position and sedimentary data suggest that the sites were originally part of the same system and that their separation was caused by younger erosive events, mainly due to the Samariniòtikos River floods.

The surfaces of the above terraces are partly eroded at their northern edge, facing the stream, and sharply cut into the Pindus Flysch terrains (Konstantopoulou and Vacondios 2006). The exposed surface of SMR-1 revealed three distinct concentrations of typical Levallois artifacts, which were accurately recorded and mapped, showing different typological compositions in the chipped stone assemblages. The central one, which consists of a roughly circular spot some 15m in diameter, yielded mainly Levallois flakes and blades, debitage products, and a great number of discoid and prismatic Levallois cores of different sizes and thicknesses, probably representing different stages of reduction. The western one, located on an eroded gentle slope (Figure 3), yielded one characteristic retouched Mousterian point, which is so far the only tool of this class ever recovered in the Pindus range, while the eastern one revealed a much sparser distribution of chipped stone artifacts, mainly unretouched flakes.

In contrast, SMR-2 showed quite a different pattern, although its stratigraphic sequence was almost identical to that of SMR-1. The lithic assemblage from this latter site was collected from a surface of 1200 m^2. It is represented by an impressive number of typical Levallois retouched tools (Figure 4), mainly side and transverse scrapers, and retouched

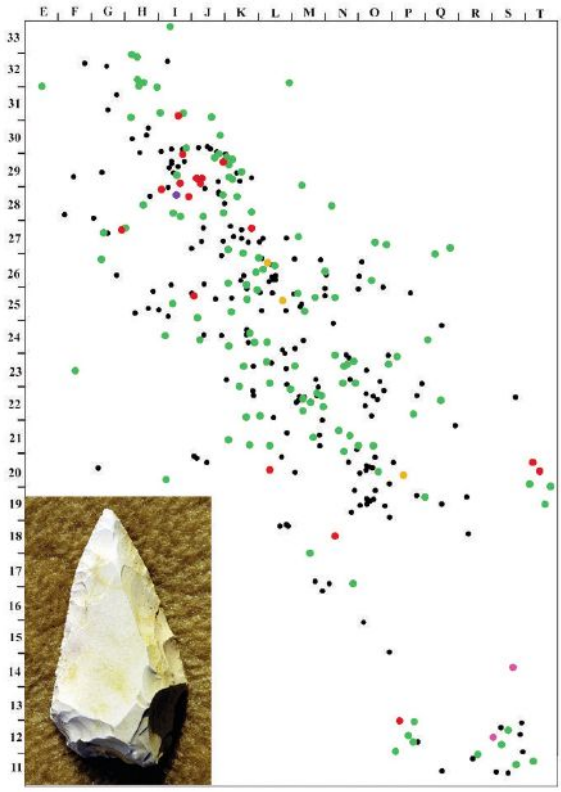

Figure 3. SMR-1: Distribution map of the chipped stone artifacts in the western spot of the site: cores (brown); Levallois points (violet); Mousterian point (blue and photograph); side scrapers (red); Levallois flakes (green); debitage flakes (black) (drawing R. Nisbet).

and unretouched Levallois points. Cores are rarer, but always of discoid type with centripetal detachments. The Levallois flakes are accurately shaped, sometimes only .5 cm thick, indicating a very high technological production skill. They often show characteristic *chapeau de gendarme* faceted butt. Furthermore, the tools from this site were manufactured from local light gray chert and dark red radiolarite, whose outcrops are known a few hundred meters from the site, and different types of allochtonous light brown, blonde, and bluish striped flint whose unknown source(s) are probably to be sought in neighboring Epirus. These latter raw materials are particularly important because they demonstrate once more the special role that good and attractive raw material sources played among hunters and gatherers, and they can help us define the movement radius of the Middle Paleolithic groups in this part of Greece.

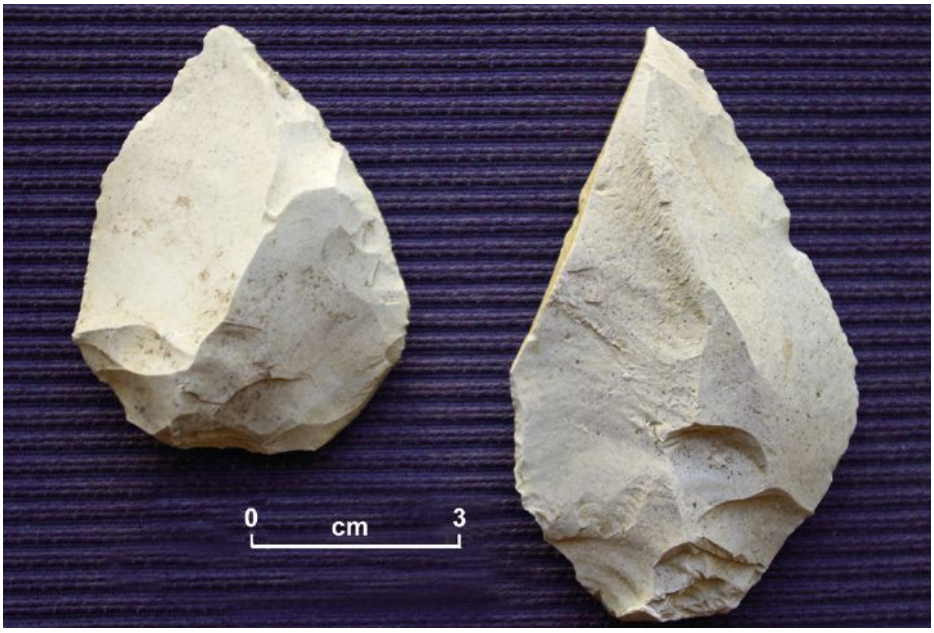

Figure 4. SMR-2: Levallois points from the site's surface (photographs by P. Biagi).

The chipped stone assemblages from the two sites suggest that different activities were exploited within the different areas of SMR-1 and SMR-2. These activities are to be framed in the general pattern of the Middle Paleolithic exploitation of the Pindus range by mobile groups of late Neanderthals who traveled across the treeless alpine pastures of the mountain watersheds and river terraces during their seasonal transfers to and from the lowlands of Western Macedonia and Epirus.

Discussion

The highland zone of the Pindus range considered in this paper plays an important role in the study of the Levallois Middle Paleolithic of southern Europe mainly because of the characteristics of the mountain territory exploited by Neanderthal groups across which they moved, most probably slightly after 70 kyr, as the stratigraphic dislocation of their material remains would suggest. In effect, both the almost treeless landscapes of the Samarina alpine pastures, degraded by centuries of Vlach intensive deforestation, pastoralism, and transhumance (Chang and Tourtellotte 1993), and the scarce human density of the region have undoubtedly favored the discovery of lithic tools along the mountain slopes, making the region of unique importance for the archaeology of the Paleolithic period.

High altitude Levallois Mousterian sites are uncommon in Europe, even in the Alps, for instance, where except for a few cases, the advance and retreat of glaciers have destroyed most traces of Middle Paleolithic activity. This is not the case for the Pindus uplands where, due to their geographic location and the limited extension of the Pleistocene moraines (Boenzi et al. 1992), the Middle Paleolithic sites were not affected by glacial action. Moving to the east, high altitude Mousterian sites have been discovered in the uplands of Iran, in the Zagros, for instance, although in very different environmental conditions.

To conclude, the two Levallois sites described above lie some 2 kms, as the crow flies, to the northwest of a very rich outcrop of good quality light gray chert that was discovered at the top of the watershed facing the sites and that was utilized as a primary raw material source. This observation is reinforced by the presence of fractured chert nodules, very large corticated primary flakes, and tested raw material blocks that are scattered over a surface of more than 10,000 m^2 around the source (Figure 5). These discoveries demonstrated the intense exploitation of the outcrop in Middle Paleolithic times and that the first decortication of the raw material nodules took place on the spot. Large nodules, up to several tens of kilograms, were noticed not only in the above outcrop, but also at shorter distance (ca. 700m) in the alluvial deposits of

Figure 5. Part of the main decortication area located just below the light gray chert outcrop on top of the watershed; an example of the surface scatter is provided in the right corner below (photograph by P. Biagi).

a narrow seasonal stream that joins the Samariniòtikos just south of the terrace where SMR-1 is located.

The complex pattern described above makes the uplands around Samarina of unique interest for Middle Paleolithic archaeology of Greece and southeastern Europe in general, for which we had very little evidence at high altitudes until a few years ago. Furthermore, it contributes to the study of Neanderthal behavior, landscape exploitation, raw material procurement, and technological choices.

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